CANBUILT MFG.

LT102

Infrared Thermometer with Laser Sight

1. SAFETY RULES

- This Instrument is designed for indoor use at temperatures between 32°F to 122°F (0°C to 50°C), altitudes up to 6500 ft. (2,000 m), and 10% to 90% relative humidity.
- To ensure that the instrument is used safely, follow all safety and operating instructions in this manual. If the instrument is not used as described in this operation manual, the safety features of this device might be impaired.
- To avoid personal injuries and damage to the instrument use extreme caution when working around hot machine or engine parts, like radiators, exhaust manifolds, catalytic converters, etc.

2. INTERNATIONAL SYMBOLS

Important information
Refer to the User's Manual

CAUTION: Laser Radiation
AVOID DIRECT EYE EXPOSURE
1mW Output at 630-670 nm
Class II Laser Product

3. TECHNICAL SPECIFICATIONS

3.1 General Specifications

Display:	3½ digits LCD, Max. of 1999 display with measuring unit indicators, Laser On indicator and backlight
Resolution:	0.1 to 1 (°C or 1°F)
Operating Temperature:	32°F to 122°F (0°C to 50°C)
Response time:	400 mS (approx.)
Target Size/ Field of View:	8:1 optics ratio with a 1" min. target
Repeatability:	0.5% of reading, plus one digit
Emissivity:	Fixed at 0.95
Laser Pointer:	Laser Diode, < 1mW output wavelength 630-670 nm, Class II
Power Source:	9-volt battery type NEDA 1604, IEC6F22 IEC 6LR61
Battery life:	Approx. 20 hours.(w/alkaline batteries)
Power Saving:	Automatic shut off after 7 seconds
Wavelength:	6 to 14 µm
Dimensions:	3.2"x 1.6"x 6.3" (82x 41.5 x160 mm)
Weight:	6.5 oz. (180 g) with battery.
Accessories:	User's Manual, Soft Pouch, and 9 V alkaline battery

3.2 Measurement Specifications

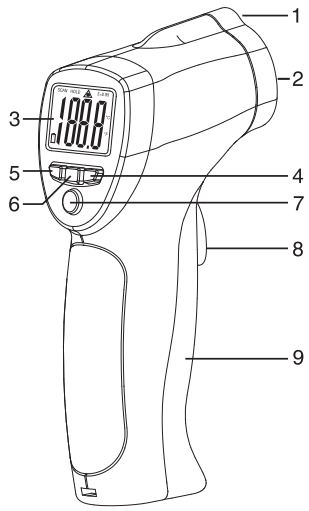
- Accuracies are ±(% of reading + number of least significant digits) at 23°C ±5°C ambient temperature, with less than 75% RH.

Function	Range	Accuracy	Resolution
Temperature ºC	-50°C to -20°C	5.0%	0.1°C
	-20°C to 200ºC	2.0%+2	
	201°C to 538°C	2.0%+2	1°C
Temperature ºF	-58°F to -4°F	9.0%	0.1°F
	-4°F to 200°F	2.0%+4	
	201°F to 1000°F	2.0%+4	1°F

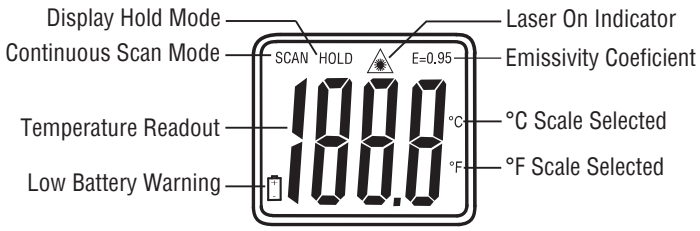
4. OPERATION

4.1 Instrument Description

1) Laser pointer
2) IR Sensor
3) LCD Display
4) °F Select Button
5) °C Select Button
6) Backlight ON/OFF Button
7) LASER ON/OFF Button
8) Measurement Trigger
9) Battery compartment cover



4.2 Display Description

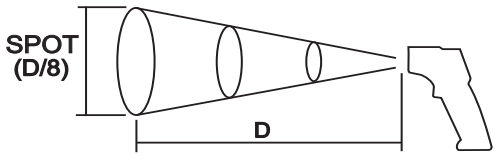


4.3 Measurement Procedures

4.3.1 Temperature Measurement

- Hold the instrument by its handle, point the IR Sensor to the area or object to measure, and press the Measurement Trigger.
- While the Measurement Trigger is kept pressed, the thermometer is continuously measuring the temperature of the object pointed at, with the IR Sensor.
- When the Measurement Trigger is released the instrument will hold the last temperature reading for 7 seconds, and then shut off automatically.

4.3.2 Field of view or measurement target area



- To take the most accurate temperature measurements, make sure that the target object is larger than the unit spot size, at any given measuring distance.
- The smaller the target the closer you should be.
- For maximum accuracy make sure that the target area is at least twice as large as the spot size.

4.3.3 Selecting Temperature Units (°C/°F).

- Make sure the instrument is turned ON, if not press the Measurement Trigger.
- Pressing the "°F" button will select Fahrenheit Degrees as the temperature measurement units.
- Pressing the "°C" button will select Celsius Degrees as the temperature measurement units.
- Temperature reading and measurement units will display on the LCD.

4.4 Other Functions

4.4.1 Display Hold

- The instrument will automatically hold the last temperature reading after the Measurement Trigger has been released for approx. 7 sec.

4.4.2 Display Backlight

- Make sure the instrument is turned ON, if not press the Measurement Trigger.
- Pressing the Backlight ON/OFF Button, will turn the display backlight ON or OFF.
- When the backlight is not needed, turn it off to prolong battery life.

4.4.3 Laser Pointer

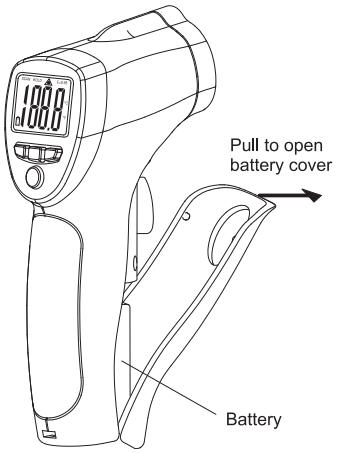
⚠ **CAUTION**: **Laser Radiation is emitted**
Avoid direct eye contact

- To turn the laser sight ON or OFF, press the "**LASER**" button, when the unit is ON. The laser sight indicator will appear on the display when the laser sight function is ON.

Note: In order to prevent injuries from an unexpected laser beam when the instrument is turned ON, every time the unit is turned ON by pressing the Measurement Trigger, the laser pointer is turned OFF, and if needed should be turned ON as explained above.

5. MAINTENANCE

5.1 Battery Replacement



- When the battery is low and needs to be replaced, the "Low Battery Warning" symbol will appear on the lower left hand side of the display.
- To replace the battery, open the battery compartment cover (located at the front of the handle) by pulling on the finger indents near the trigger, and remove the battery.
- Replace with a new 9 V alkaline battery type NEDA 1604 or IEC6F22 observing the proper polarity when connecting to the battery terminals.
- Close the battery cover.

5.2 Cleaning

5.2.1 Lens cleaning

Debris or dirt on the lens may cause obstruction and reduce the accuracy of the thermometer. If this occurs, either wipe the lens with a Q-tip (moistened with water only) or blow off the loose particles with clean compressed air. Do not use solvent on the lenses, as it may become damage.

5.2.2 Exterior cleaning

Periodically wipe the case with a soft damp cloth and mild household cleanser. Do not use abrasives or solvents. Ensure that no water gets inside the instrument to prevent possible shorts and damage.

6. WARRANTY

One year limited warranty, excluding batteries and fuses. For details see Standard Warranty Information on our web page or you may request a printed copy.